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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,400	11/15/2000	Daisuke Arai	WATA:009	3120

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[REDACTED]  
EXAMINER

PARKER, KENNETH

[REDACTED]  
ART UNIT PAPER NUMBER

2871

DATE MAILED: 10/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/713,400	ARAI ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Kenneth A Parker	2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 16 August 2002.
- 2a) This action is **FINAL**.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-34 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

What is meant by "each film" reflecting the claimed percentage of light cannot be determined. Please keep in mind that with these types of devices it is the interfaces that reflect light, not the layers themselves. Also, with one pair of layers, is the range claimed genuinely for each layer, in which case with 95% reflected for the first layer and 95% for the second layer, the total reflection is 99%. It is believed that the reflection is for the interface between a pair of layers (the description of the selection of the thickness is correct in describing the thickness for the first and second film set at...).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-4, 9, 24, 32-34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hilton et al, 4,185,894.

Hilton has a first and second film with indexes of refraction and thicknesses that anticipate the claimed levels (see chart A, column 3). Lacking from the disclosure is that "each" film reflects the claimed amount of light. The combined films reflect color, and therefore around 1/3 of the light, but what "each" film does is not disclosed. As the structure is the same as applicants and the way the device functions is the same as applicants, it is reasonable to put the burden back on applicant to show that the device is novel and nonobvious. See MPEP 2112.

Claims 1-4, 6, 9, 11, 17, 24, 32-34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Usami US005532851A.

Usami has a first and second film with indexes of refraction and thicknesses that anticipate the claimed levels (see discussion in column 7, lines 3-37, 47-66 and column, 8, line 1 through column 9, line 57). Lacking from the disclosure is that "each" film reflects the claimed amount of light. Sets of two layers and six layers are explicitly disclosed (col. 9, lines 59-66). Many different ratios are illustrated (figs 3a-3d). As the structure is the same as applicants and the way the device functions is the same as applicants, it is reasonable to put the burden back on applicant to show that the device is novel and nonobvious. See MPEP 2112.

Claims 1-4, 9, 24, 32-34 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kamiya US006317179B1

Kamiya has a first and second film with indexes of refraction and thicknesses that anticipate the claimed levels (see abstract, and throughout document). Lacking from the disclosure is that "each" film reflects the claimed amount of light. As the structure is the same as applicants and the way the device functions is the same as applicants, it is reasonable to put the burden back on applicant to show that the device is novel and nonobvious. See MPEP 2112.

Claims 1-4, 9, 24, 32-34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Prince et al US005510215A.

Prince et al has a first and second film with indexes of refraction and thicknesses that anticipate the claimed levels (see columns 3-4). Lacking from the disclosure is that "each" film reflects the claimed amount of light. As the structure is the same as applicants and the way the device functions is the same as applicants, it is reasonable to put the burden back on applicant to show that the device is novel and nonobvious.

See MPEP 2112.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebihara et al US005990995A in view of Prince et al US005510215A, Kamiya US006317179B1, Usami US005532851A, Hilton et al, 4,185,894.

Ebihara discloses only a transreflector on a transparent substrate, where the transreflector is made of a dielectric multi-layer film (column 12, lines 36-41). Ebihara lacks the disclosure of the structure of the multi-layer film. To show that the claimed structure, the index of refractions, thicknesses, and materials were all conventional, all of the secondary references have been provided as evidence. The relevant portions of those documents are listed above in the rejections over the references individually.

Lacking from the disclosure is that "each" film reflects the claimed amount of light. As the structure is the same as applicants and the way the device functions is the same as applicants, it is reasonable to put the burden back on applicant to show that the device is novel and nonobvious. See MPEP 2112.

Still lacking from the disclosure is the number of pairs employed. The number of pairs was a result effective variable, where the more produced more precisely taylorable characteristic but at the price of cost, and as it has been judicially determined that the selection of a result effective variable would have been obvious, the selection of the number of pairs would have been obvious.

Claims 5-8, 10-23, 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hilton et al, 4,185,894.

Still lacking from the disclosure is the number of pairs employed. The number of pairs was a result effective variable, where the more produced more precisely taylorable characteristic but at the price of cost, and as it has been judicially determined that the selection of a result effective variable would have been obvious, the selection of the number of pairs would have been obvious.

Claims 5,7-8, 10, 12-16, 18-23 and 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usami US005532851A.

Lacking from the disclosure is the number of pairs employed. The number of pairs was a result effective variable, where the more produced more precisely taylorable

characteristic but at the price of cost, and as it has been judicially determined that the selection of a result effective variable would have been obvious, the selection of the number of pairs would have been obvious.

Claims 5-8, 10-23, 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya US006317179B1.

Lacking from the disclosure is the number of pairs employed. The number of pairs was a result effective variable, where the more produced more precisely taylorable characteristic but at the price of cost, and as it has been judicially determined that the selection of a result effective variable would have been obvious, the selection of the number of pairs would have been obvious.

Claims 5-8, 10-23, 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prince et al US005510215A

Lacking from the disclosure is the number of pairs employed. The number of pairs was a result effective variable, where the more produced more precisely taylorable characteristic but at the price of cost, and as it has been judicially determined that the selection of a result effective variable would have been obvious, the selection of the number of pairs would have been obvious.

***Response to Arguments***

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please note that applicant's claims are merely directed to multilayer dielectrics, and are not limited to LCD's using dielectric transflectors. There the claims are so broad that they read on any dielectric beam splitter or partially transmitting mirror. In fact it is very likely that the whole of class 359, subclass 583 and 589-590, and large portions of subclasses 629-637 read on the current claims, as well as the discussions of interferences films in almost any optics book. Once the issues regarding the 112 rejections are overcome, the exact references applicable will be more easily determined. The selected references are more directed to more similar applications of the films, therefore are the references which have been applied.

**Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth A Parker whose telephone number is 703-305-6202. The examiner can normally be reached on 9:30-6:00.**

**If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L. Sikes can be reached on 308-4842. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.**

**Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.**

Kenneth A Parker  
Primary Examiner  
Art Unit 2871